

SEQUENCE LISTING

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<120> NOVEL ANTI-IGF-IR ANTIBODIES AND USES THEREOF

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<151> 2003-07-11

<150> PCT/FR 03/00 178
<151> 2003-01-20

<150> FR 02/00 653
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Ser Asp Val Leu Met Thr Gln ile Pro Leu Ser Leu Pro Val Ser Leu
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Gly Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His
30 35 40

agt aat gga aac acc tat tta caa tgg tac ctg cac aaa cca ggt cag 198
Ser Asn Gly Asn Thr Tyr Leu Gln Trp Tyr Leu Gln Lys Pro Gly Gln
45 50 55

tct cca aag ctc ctg atc tac aaa gtt tcc aac cga ctt tat ggg gtc 246
Ser Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Tyr Gly Val
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cca gac agg ttc agt ggc agt gga tca ggg acc gat ttc aca ctc aag 294
Pro Asp Arg Phe Ser Gly Ser Gly Lys Ser Gly Thr Asp Phe Thr Leu Lys
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atc agc agc glg gag gct gag gat ctg gga gtt tat tac tgc ttt caa 342
Ile Ser Ser Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Phe Gln
90 95 100 105

ggt tca cat gtt ccg tgg acg ttc ggt gga ggc acc aag ctg gaa atc 390
 Gly Ser His Val Pro Trp Thr Phe Gly Gly Thr Lys Leu Glu Ile
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 Gln Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr
 50 55 60
 Lys Val Ser Asn Arg Leu Tyr Gly Val Pro Asp Arg Phe Ser Gly Ser
 65 70 75 80
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Gln Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Gly
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Gly Tyr Leu Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu
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Trp Met Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro Ser
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Leu Lys Asp Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe
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Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp Met Gly Tyr Ile Ser Tyr
50 55 60

Asp Gly Thr Asn Asn Tyr Lys Pro Ser Leu Lys Asp Arg Ile Ser Ile
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75

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Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Tyr Gly Val Pro
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Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
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Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

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35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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50 55 60

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65 70 75 80

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35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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20 25 30

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35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
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20 25 30

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35 40 45

Pro Gln Leu Leu Ile Tyr Leu Val Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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20 25 30

Asn Gly Asn Thr Tyr Leu Gln Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Tyr Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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Met Phe Trp Phe Pro Ala Ser Ser Ser Asp Val Val Met Thr Gln Ser
15 20 25

cca ctg tcc ctg ccc gtc acc cct gga gag ccg gcc tcc atc tcc tgc 147
Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys
30 35 40

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Arg Ser Ser Gln Ser Ile Val His Ser Asn Gly Asn Thr Tyr Leu Gln
45 50 55

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Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Lys
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Val Ser Asn Arg Leu Tyr Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
75 80 85 90

tca ggc aca gat ttt aca ctg aaa atc agc aga gtg gag gct gag gat 339
Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
95 100 105

gtt ggg gtt tat tac tgc ttt caa ggt tca cat gtt ccg tgg acg ttc 387
Val Gly Val Tyr Tyr Cys Phe Gln Gly Ser His Val Pro Trp Thr Phe
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Gly Gln Gly Thr Lys Val Glu Ile Lys
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35 40 45
Val His Ser Asn Gly Asn Thr Tyr Leu Gln Trp Tyr Leu Gln Lys Pro
50 55 60
Gly Gln Ser Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Tyr
65 70 75 80
Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
85 90 95
Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
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ggacctctcg gccggaggtg gaggacgtcc agatcagttc cgtaacatgt atcattacct 180
ttgtggataa acgttaccat ggacgtcttc ggccccgtca gaggtctcga ggactagata 240
tttcaaagat tagccgaagt accccaggga ctgtccaaagt caccgtcacc tagtccgtgt 300
ctaaaatgtg acttttagtc gtctcacctc cgactcctac aacccccaaat aatgacgaaa 360
gttccaagtg tacaaggcac ctgcaaggccg gttccctggt tccaccttta gtttgcactc 420
acctaggaga cgc 433

<210> 65
<211> 112

<212> PRT
<213> Homo sapiens

<400> 65

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
20 25 30
Asn Gly Asn Thr Tyr Leu Gln Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45
Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Tyr Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Phe Gln Gly
85 90 95
Ser His Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 66
<211> 433
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (22)..(414)

<400> 66

gtcagaacgc gtgccgccac c atg aag ttg cct gtt agg ctg ttg gtg ctg 51
Met Lys Leu Pro Val Arg Leu Leu Val Leu 10
atg ttc tgg ttt cct gct ccc agc agt gat att gtg atg act cag tct 99
Met Phe Trp Phe Pro Ala Ser Ser Ser Asp Ile Val Met Thr Gln Ser 25
cca ctg tcc ctg ccc gtc acc cct gga gag ccg gcc tcc atc tcc tgc 147
Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys 40
agg tct agt cag agc att gta cat agt aat gga aac acc tat ttg caa 195
Arg Ser Ser Gln Ser Ile Val His Ser Asn Gly Asn Thr Tyr Leu Gln 55
tgg tac ctg cag aag cca ggg cag tct cca gag ctg ctg atc tat aaa 243
Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Lys 70
gtt tct aat cgg ctt tat ggg gtc cct gac agg ttc agt ggc agt gga 291
Val Ser Asn Arg Leu Tyr Gly Val Pro Asp Arg Phe Ser Gly Ser Gly 90
tca ggc aca gat ttt aca ctg aaa atc agc aga gtg gag gct gag gat 339

Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
 95 100 105
 gtt ggg gtt tat tac tgc ttt caa ggt tca cat gtt cgg tgg acg ttc 387
 Val Gly Val Tyr Tyr Cys Phe Gln Gly Ser His Val Pro Trp Thr Phe
 110 115 120
 ggc caa ggg acc aag gtg gaa atc aaa cgt gaggatgcc tctgcy 433
 Gly Gln Gly Thr Lys Val Glu Ile Lys
 125 130

<210> 67
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 67
 Met Lys Leu Pro Val Arg Leu Leu Val Leu Met Phe Trp Phe Pro Ala
 1 5 10 15
 Ser Ser Ser Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val
 20 25 30
 Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile
 35 40 45
 Val His Ser Asn Gly Asn Thr Tyr Leu Gln Trp Tyr Leu Gln Lys Pro
 50 55 60
 Gly Gln Ser Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Tyr
 65 70 75 80
 Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
 85 90 95
 Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
 100 105 110
 Phe Gln Gly Ser His Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val
 115 120 125
 Glu Ile Lys
 130

<210> 68
 <211> 433
 <212> DNA
 <213> Homo sapiens

<400> 68
 cagtcttgcg caccggcgtg gtacttcaac ggacaatccg acaaccacga ctacaagacc 60
 aaaggacgaa ggtcgtcact acaacactac tgagtcagag gtgagaggga cgggcagrgg 120
 ggacctctcg gccggaggta gaggaagctc agatcagtcg cgtaacatgt atcattacct 180
 ttgtggataa acgttaccat gaacgtcttc ggtcccgtca gaggtgtcga ggactagata 240
 ttccaaagat tagccgaatt accccaggga ctgtccaaagt caccgtcacc tagtccgtgt 300
 ctaaaatgtg acttttagtc gtctcacctc cgactcctac aaccocaaat aatgacgaa 360
 gtcccaagtg tacaaggcac ctgcaagccg gttccctggt tccaccttta gtttgcactc 420
 accagggaga cgc 433

<210> 69
<211> 117
<212> PRT
<213> Mus musculus

<400> 69
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15
Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Gly Gly
20 25 30
Tyr Leu Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
35 40 45
Met Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro Ser Leu
50 55 60
Lys Asp Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
65 70 75 80
Leu Lys Leu Asn Ser Val Thr Asn Glu Asp Thr Ala Thr Tyr Tyr Cys
85 90 95
Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110
Leu Thr Val Ser Ser
115

<210> 70
<211> 118
<212> PRT
<213> Mus musculus

<400> 70
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15
Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Ser Gly
20 25 30
Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
35 40 45
Met Gly Tyr Ile Asn Tyr Asp Gly Asn Asn Asn Tyr Asn Pro Ser Leu
50 55 60
Lys Asn Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
65 70 75 80
Leu Lys Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
85 90 95
Ala Arg Glu Gly Tyr Gly Tyr Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110
Thr Leu Thr Val Ser Ser

<210> 71
 <211> 118
 <212> PRT
 <213> Mus musculus

<400> 71
 Glu Val Gln Leu Gln Glu Ser Gly Pro Ser Leu Val Lys Pro Ser Gln
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Ser Val Thr Gly Asp Ser Ile Thr Ser Gly
 20 25 30
 Tyr Trp Asn Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
 35 40 45
 Met Gly Tyr Ile Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu
 50 55 60
 Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Tyr Phe
 65 70 75 80
 Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
 85 90 95
 Ala Arg Gly Gly Tyr Gly Tyr Gly Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110
 Thr Val Thr Val Ser Ser
 115

<210> 72
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 72
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Val Ser Ser Tyr
 20 25 30
 Trp Ser Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35 40 45
 Ile Gly Arg Ile Tyr Tyr Ser Gly Ser Thr Xaa Tyr Asn Pro Ser Leu
 50 55 60
 Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser
 65 70 75 80
 Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Glu Leu Pro Gly Gly Tyr Asp Val Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser
115

<210> 73
<211> 123
<212> PRT
<213> Homo sapiens

<400> 73

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Ser Ser Gly
20 25 30
Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45
Ile Gly Ser Met Phe His Ser Gly Ser Ser Tyr Tyr Asn Pro Ser Leu
50 55 60
Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser
65 70 75 80
Leu Gln Leu Arg Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Arg Tyr Cys Ser Ser Thr Ser Cys Asn Trp Phe Asp Pro
100 105 110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 74
<211> 98
<212> PRT
<213> Homo sapiens

<400> 74

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Ser Ser Gly
20 25 30
Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45
Ile Gly Ser Ile Tyr His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu
50 55 60
Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser
65 70 75 80
Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg

<210> 75
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 75
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Gly Gly
 20 25 30
 Tyr Leu Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35 40 45
 Met Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro Ser Leu
 50 55 60
 Lys Asp Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe Ser
 65 70 75 80
 Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly Thr Leu
 100 105 110
 Val Thr Val Ser Ser
 115

<210> 76
 <211> 445
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (22)..(426)

<400> 76
 gtcagaacgc qtgcgcgcac c atg aaa qtg ttg agt ctg ttg tac ctc ttg 51
 Met Lys Val Leu Ser Leu Leu Tyr Leu Leu 10
 1 5
 acc gcc att cct ggt atc ctg tct cag gtg cag ctt cag gag tcg ggc 99
 Thr Ala Ile Pro Gly Ile Leu Ser Gln Val Gln Leu Gln Glu Ser Gly 25
 15 20
 cca gga ctg gtg aag cct tcg gag acc ctg tcc ctc acc tgc act gtc 147
 Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val 40
 30 35
 tct ggt tac tcc atc acc ggt ggt tat tta tgg aac tgg ata cgg cag 195
 Ser Gly Tyr Ser Ile Thr Gly Gly Tyr Leu Trp Asn Trp Ile Arg Gln 55
 45 50
 ccc cca ggg aag gga ctg gag tgg atg ggg tat atc agc tac gac ggt 243
 Pro Pro Gly Lys Gly Leu Glu Trp Met Gly Tyr Ile Ser Tyr Asp Gly 70
 60 65

acc aat aac tac aaa ccc tcc ctc aag gat cga atc acc atn tca cgt 291
 Thr Asn Asn Tyr Lys Pro Ser Leu Lys Asp Arg Ile Thr ile Ser Arg
 75 80 85 90

gac acg tcc aag aac cag ttc tcc ctg aag ctg agc tct gtg acc gct 339
 Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala
 95 100 105

gcg gac act gca gtg tat tac tgt gcg aga tac ggt agg gtc ttc ttt 387
 Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Tyr Gly Arg Val Phe Phe
 110 115 120

gac tac tgg ggc cag gga acc ctg gtc acc gtc tcc tca ggtgagtgga 436
 Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 125 130

tcctctgcg 445

<210> 77
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 77
 Met Lys Val Leu Ser Leu Leu Tyr Leu Leu Thr Ala Ile Pro Gly Ile
 1 5 10 15
 Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro
 20 25 30
 Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr
 35 40 45
 Gly Gly Tyr Leu Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
 50 55 60
 Glu Trp Met Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro
 65 70 75 80
 Ser Leu Lys Asp Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln
 85 90 95
 Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
 100 105 110
 Tyr Cys Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly
 115 120 125
 Thr Leu Val Thr Val Ser Ser
 130

<210> 78
 <211> 445
 <212> DNA
 <213> Homo sapiens

<400> 78
 cagtccttgcg cacggcgggtg gtactllcag aactcagaca acatggagaa ctgtcggtaa 60


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ggaccatagg acagagtcca cgtcgaagtc ctcagcccgg gtccctgacca ctccgggaagc 120
ctctggggaca gggagtggac gtgacagaga ccatgaggt agtggccacc aataantacc 180
ttgacctatg ccgtcggggg tcccttccct gacctcacct ncccatata gtogatgctg 240
ccatgggttat tgatgttltgg gagggagttc ctacgttagl ggtatagtgc actgtgcagg 300
ttcttggtca agagggactt cgactcgaga cactggcgac gcctgtgacg tcnataatg 360
acacgctcta tgccatccca gaagaaactg atgaccccgg tcccttggga ccagtggcag 420
aggagtccac tcacctagga gacgc 445

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<210> 79
 <211> 117
 <212> PRT
 <213> Homo sapiens

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<400> 79
Gln Val Gln Leu Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1          5          10          15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Gly Gly
 20          25          30
Tyr Leu Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35          40          45
Ile Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro Ser Leu
 50          55          60
Lys Asp Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe Ser
 65          70          75          80
Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
 85          90          95
Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly Thr Leu
100          105          110
Val Thr Val Ser Ser
115

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<210> 80
 <211> 445
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (22)..(426)

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<400> 80
gtcagaacgc gtgcggccac c atg aaa gtg ttg agt ctg ttg tac ctc ttg 51
Met Lys Val Leu Ser Leu Leu Tyr Leu Leu
 1          5          10
aca gcc att cct ggt atc ctg tct cag gtg cag ctt cag gag tcg gcc 99
Thr Ala Ile Pro Gly Ile Leu Ser Gln Val Gln Leu Gln Glu Ser Gly
15          20          25
cca gga ctg gtg aag cct tcg gag acc ctg tcc ctc acc tgc act gtc 147
Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val

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30	35	40	
tct ggt tac tcc atc acc ggt ggt tat tta tgg aac tgg ata cgg cag			195
Ser Gly Tyr Ser Ile Thr Gly Gly Tyr Leu Trp Asn Trp Ile Arg Gln			
45	50	55	
ccc cca ggg aag gga ctg gag tgg atc ggg tat atc agc tac gac ggt			243
Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Ser Tyr Asp Gly			
60	65	70	
acc aat aac tac aaa ccc tcc ctc aag gat cga gtc acc ata tca cgt			291
Thr Asn Asn Tyr Lys Pro Ser Leu Lys Asp Arg Val Thr Ile Ser Arg			
75	80	85	90
gac acg tcc aag aac caa ttc tcc ctg aag ctg agc tct gtg acc gct			339
Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala			
95	100	105	
gcg gac act gca gtg tat tac tgt gcg aga tac ggt agg gtc ttc ttt			387
Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Tyr Gly Arg Val Phe Phe			
110	115	120	
gac tac tgg ggc cag gga acc ctg gtc acc gtc tcc tca ggtgagtga			436
Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser			
125	130		
tcctctgcg			445

<210> 81
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 81	
Met Lys Val Leu Ser Leu Leu Tyr Leu Leu Thr Ala Ile Pro Gly Ile	
1	15
Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro	
20	30
Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr	
35	45
Gly Gly Tyr Leu Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu	
50	60
Glu Trp Ile Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro	
65	80
Ser Leu Lys Asp Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln	
85	95
Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr	
100	110
Tyr Cys Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly	
115	125
Thr Leu Val Thr Val Ser Ser	
130	

<210> 82
 <211> 445
 <212> DNA
 <213> Homo sapiens

<400> 82
 caqtcttgcg caccggcggg gtactttcac aactcagaca acatggagaa ctgtcggtaa 60
 qqaccataag acagagtcca cgtcgaagtc ctcagcccg gtcctgacca ctccggaagc 120
 ctctgggaca qqqaqtggac gtgacagaga ccaatgaggt agtcgccacc aataaatacc 180
 ttgacctatg ccgtcqqqqq tcccttcccl gacctcacct agcccatata gtcgatgctg 240
 ccattggtat tgatgttttg qaqqqaqtte ctagclcagt ggtatagtgc actgtgcagg 300
 ttcttggtca agagggactt cgactcgaga cactggcgac gctgtggacg tcacataatg 360
 acacgtctta tgccatccca gaagaaactg atgaccccg tcccttggga ccagtggcag 420
 aqgagtccac tcacctagga gacgc 445

<210> 83
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 83
 Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1 5 10 15
 Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Ser Gly Gly
 20 25 30
 Tyr Leu Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35 40 45
 Ile Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro Ser Leu
 50 55 60
 Lys Asp Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser
 65 70 75 80
 Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly Thr Leu
 100 105 110
 Val Thr Val Ser Ser
 115

<210> 84
 <211> 445
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (22)..(426)

<400> 84
 gtcagaacgc glgcggccac c atg aaa gtg ttg agt ctg ttg tac ctc ttg 51
 Met Lys Val Leu Ser Leu Leu Tyr Leu Leu

	1	5	10	
aca gcc att cct ggt atc ctg tct cag gtg cag ctt cag gag tcg ggc				99
Thr Ala Ile Pro Gly Ile Leu Ser Gln Val Gln Leu Gln Glu Ser Gly				
	15	20	25	
cca gga ctg glg aag cct tcg gag acc ctg tcc ctc acc tgc act gtc				147
Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val				
	30	35	40	
tct ggt tac tcc atc agc ggt qgt tat tta tgg aac tgg ata cgg cag				195
Ser Gly Tyr Ser Ile Ser Gly Gly Tyr Leu Trp Asn Trp Ile Arg Gln				
	45	50	55	
ccc cca qgg aag gga ctg gag tgg atc ggg tat atc agc tac gac ggt				243
Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Ser Tyr Asp Gly				
	60	65	70	
acc aat aac tac aaa ccc tcc ctc aag gat cga gtc acc ata tca ctg				291
Thr Asn Asn Tyr Lys Pro Ser Leu Lys Asp Arg Val Thr Ile Ser Val				
	75	80	85	90
gac acg tcc aag aac cag ttc tcc ctg aag ctg agc tct gtg acc gct				339
Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala				
	95	100	105	
gcg gac act gca gtg tat tac tgl gcg aga tac ggt agg gtc ttc ttt				387
Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Tyr Gly Arg Val Phe Phe				
	110	115	120	
gac tac tgg ggc cag gga acc ctg gtc acc gtc tcc tca ggtgagtgga				436
Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser				
	125	130		
tcctctgcg				445
<210> 85				
<211> 135				
<212> PRT				
<213> Homo sapiens				
<400> 85				
Met Lys Val Leu Ser Leu Leu Tyr Leu Leu Thr Ala Ile Pro Gly Ile				
	1	5	10	15
Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro				
	20	25	30	
Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Ser				
	35	40	45	
Gly Gly Tyr Leu Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu				
	50	55	60	
Glu Trp Ile Gly Tyr Ile Ser Tyr Asp Gly Thr Asn Asn Tyr Lys Pro				
	65	70	75	80
Ser Leu Lys Asp Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln				
	85	90	95	

Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
100 105 110

Tyr Cys Ala Arg Tyr Gly Arg Val Phe Phe Asp Tyr Trp Gly Gln Gly
115 120 125

Thr Leu Val Thr Val Ser Ser
130

<210> 86
<211> 445
<212> DNA
<213> Homo sapiens

<400> 86
cagtccttgcg cacggcggtg gtactttcac aactcagaca acatggagaa ctgtcggtaa 60
ggaccatagg acagagtgcca cgtcgaagtc ctacgcccgg gtcttgacca cttcggaagc 120
ctctgggaca gggagtggac gtgacagaga ccaatgaggt agtcgccacc aataaatacc 180
ttgacctatg ccgtcggggg tcccttcctt gacctcacct agcccatata gtcgatgctg 240
ccatgggttat tgatgtttgg gagggagttc ctagctcagt ggtatagtca cctgtgcagg 300
ttcttggtca agagggactt cgactcgaga cactggcgac gcctgtgacg tcacataatg 360
acacgtctta tgccatccca gaagaaactg atgaccccgg tcccttgga ccagtggcag 420
aggagtccac tcacctagga gacgc 445

<210> 87
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Description de la Artificial sequence:
Oligonucleotide

<400> 87
gtcagaacgc gtgcccgc 19

<210> 88
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 88
accatgaagt tgctgttag gctgttggtg ct 32

<210> 89
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 89
gatgttcagg tttcctgctt ccagcagtg tg

32

<210> 90
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 90
ttgtgatgac tcagtctcca ctctccctgc cc

32

<210> 91
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 91
gtcaccctg gagagccggc ctccatctcc tg

32

<210> 92
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 92
caqgtctagt cagaccatta tacataglaa tg

32

<210> 93
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 93
gaaacaccta tttggaatgg tacctgcaga

30

<210> 94
<211> 32
<212> DNA
<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 94

ggcaacttca tgggtggcggc acgcgttctg ac

32

<210> 95

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 95

gaaaccagaa catcagcacc aacagcctaa ca

32

<210> 96

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 96

ctgagtcac acaacatcac tgctggnagc ag

32

<210> 97

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 97

tctccagggg tgacgggcag ggagagtgga ga

32

<210> 98

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 98

tctgactaga cctgcaggag atggaggccg gc

32

<210> 99

<211> 31
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 99
aaataqqtgt ttccattact atgtacaatg c

31

<210> 100
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 100
cagggcagtc tccacagctc ctgatctata aa

32

<210> 101
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 101
gtttctaatac ggctttatgg ggtccctgac ag

32

<210> 102
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 102
gttcagtggc agtggatcag gcacagattt ta

32

<210> 103
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 103

cactgaaaat cagcagagtg gaggcagagg at

32

<210> 104

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 104

gttgggggttt attactgctt tcaagggttca ca

32

<210> 105

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 105

tggtccgtgg acgttcggcc aagggaccaa gg

32

<210> 106

<211> 30

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 106

tggaatcaa acgtgaqtgg atcctctgcg

30

<210> 107

<211> 17

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 107

tctgcaggta ccattgc

17

<210> 108

<211> 21

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 108
tgcaatggta cctgcagaag c

21

<210> 109
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 109
agactgccct ggcttctgca ggtaccattg ca

32

<210> 110
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 110
cgattagaaa ctttatagat caggagctgt gg

32

<210> 111
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 111
tgcactgaa cctgtcagg accccataaa gc

32

<210> 112
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 112
gattttcagl gtaaaatctg tgccatgcc ac

32

<210> 113
<211> 32

<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 113
taaaccocaa catcctcagc ctccactctg ct . 32

<210> 114
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 114
tccacqgaac atgtgaacct tgaaagcagt aa 32

<210> 115
<211> 31
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 115
tttgatttcc accttqgtcc cttggccgaa c- 31

<210> 116
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 116
cgcaqaggat ccactcacg 19

<210> 117
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 117
gtcagaacgc gtgccgcc 18

<210> 118
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 118
accatgaaag tgttgagtct gttgtacctc ttga

34

<210> 119
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 119
cagccattcc tggatccctg tctcagglgc agct

34

<210> 120
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 120
tcaggagtcg ggcccaggac tggtaagcc ttcg

34

<210> 121
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 121
gagaccctgt ccttcacctg cactgtctct ggt

33

<210> 122
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:

Oligonucleotide

<400> 122

lactccatca ccggtggtta tttatggaac tgg

33

<210> 123

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 123

atacggcagc cccagggaa gggactggag tgg

33

<210> 124

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 124

atggggtata tcagctacga cggtagcatt aac

33

<210> 125

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 125

tcaacacttt catggtggcg gcaaggcttc tgac

34

<210> 126

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 126

ataccagcaa tggctgtcaa gaggtacaac agac

34

<210> 127

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 127

tgggcccgac tcctgaaqct gcacctgaga cagg

34

<210> 128

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 128

tgagggacag ggtctccgaa ggcttcacca gtcc

34

<210> 129

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 129

ccaccggtga tggagtaacc agagacagtg cagg

34

<210> 130

<211> 34

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 130

ccctgggggc tgcagtatcc agttocataa ataa

34

<210> 131

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 131

tagctgatat accccatcca ctccagtcac tl

32

<210> 132
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 132
gctattggta ccgtcg

16

<210> 133
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 133
lacgacggta ccaataacta c

21

<210> 134
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 134
aaacctccc tcaaggatcg atcaccata tc

32

<210> 135
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 135
acgtgacag tccaagaacc agttctccct ga

32

<210> 136
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 136
agctgagctc tgtgaccgct gcggacactg ca

32

<210> 137
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 137
gtgtattact gtgcgagata cggtagggtc tt

32

<210> 138
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 138
ctltgactac tggggccagc gaacctggt ca

32

<210> 139
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 139
ccgtctcttc aggtgagtg atctcttcgc

30

<210> 140
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 140
agggagggtt tgtagttatt ggtaccgtcg ta

32

<210> 141
<211> 32
<212> DNA
<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 141

acgtgtcagc tgatatggcg attcgatcct tg

32

<210> 142

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 142

aaagctcagc ttcagggaga actggttctt gg

32

<210> 143

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 143

cagtaataca ctgcagtgtc cgcagcggtc ac

32

<210> 144

<211> 32

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 144

agttagtcaaa gaagacccta ccgtatctcg ca

32

<210> 145

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence:
Oligonucleotide

<400> 145

ctgagcagac gglgaccagg gttccctggc ccc

33

<210> 146
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Description of artificial sequence:
Oligonucleotide

<400> 146
cqcagaggat ccactcac 18

<210> 147
<211> 31
<212> DNA
<213> Homo sapiens

<400> 147
ctggttactc catcagcggg gggtatttat g 31

<210> 148
<211> 31
<212> DNA
<213> Homo sapiens

<400> 148
cataaataac caccggtgat ggagtaacca g 31

<210> 149
<211> 31
<212> DNA
<213> Homo sapiens

<400> 149
qqqactggag tggatcgggt atatcagcta c 31

<210> 150
<211> 31
<212> DNA
<213> Homo sapiens

<400> 150
gtagctgata taccgatcc actccagtc c 31

<210> 151
<211> 31
<212> DNA
<213> Homo sapiens

<400> 151
tcccacaagg atcgagtcac catatcacgt g 31

<210> 152
<211> 31
<212> DNA

<213> Homo sapiens

<400> 152

cacgtgatat ggtgactcga tccttgaggg a

31

<210> 153

<211> 39

<212> DNA

<213> Homo sapiens

<400> 153

gacgagtcga ccatatcaat ggacacgtcc aagaaccag

39

<210> 154

<211> 39

<212> DNA

<213> Homo sapiens

<400> 154

ctggttccttg gacgtgtcca ctgatatggt gactcgatc

39

<210> 155

<211> 31

<212> DNA

<213> Homo sapiens

<400> 155

gcttccagca gtgatatgtg gatgactcag t

31

<210> 156

<211> 31

<212> DNA

<213> Homo sapiens

<400> 156

actgagtcac cacaatatca ctgctggaag c

31